



UNITED STATES DEPARTMENT OF AGRICULTURE.

FEDERAL HORTICULTURAL BOARD.

WASHINGTON, D. C.

LETTER OF INFORMATION NO. 21.

JANUARY 31, 1916.

DEAR SIR: Since the issuance of Letter of Information No. 20 three egg masses of the gipsy moth (*Porthetria dispar*) have been collected on azaleas from the following shippers in Belgium: P. & T. Vander Sypt, Loochristy-lez-Gand; Van Dillewyn & Thiel, Meirelbeke; and Aug. Van Hecke, Mont St. Amand, Gand. These interceptions emphasize the necessity of carefully inspecting all imported field-grown stock. Larvae of the narcissus fly (*Merodon narcissi*) were found in bulbs from England. The eugenia scale (*Phenacaspis eugenæ*) was collected on ornamental plants from China.

In order to expedite the preparation of the Letters of Information it is earnestly requested that the inspectors, in submitting their reports, be more explicit in listing the pests intercepted. If in doubt as to the identity of a pest it is suggested that the inspector refer the material to his State experiment station or to this office for identification. In submitting such material it should be borne in mind that a liberal supply is desired, with data as to host, locality, etc. In order to avoid confusion it is perhaps desirable for the inspector to retain his report until the identification has been received. The identification can then be entered on the report, and the report submitted to the board.

This office has recently received a communication from Mr. N. van Poeteren, local chief of the Phytopathological Service of Holland, Wageningen, Holland, requesting that the Phytopathological Service be advised of all interceptions on Holland stock. This information should indicate the number of the copy certificate attached to the case, the name of the grower, and the contents of the case. The information desired can perhaps be most readily given by removing the certificate from the box containing infested material. The names of the insects and diseases collected on the material can be written on the certificate and the certificate returned to the Phytopathological Service of Holland, either direct or through this office. This procedure would avoid much clerical work on the part of the inspectors, and at the same time indubitably connect the foreign inspectors with the infested material.

Yours, very truly,

C. L. MARLATT,
Chairman of Board.

LIST, BY COUNTRIES, OF PESTS COLLECTED.

(The number in parentheses following name of host indicates the number of times reported.)

Country of origin and name of pest.	Host.
ALGERIA.	
Disease: <i>Phoma</i> sp.....	<i>Quercus falcata</i> (1).
ARABIA.	
<i>Calandra oryza</i> (rice weevil).....	Yeheb nuts (1).
<i>Ephestia kuehniella</i>	Do.
<i>Silvanus surinamensis</i> (saw-toothed grain beetle).....	Do.
ARGENTINA.	
Diseases:	
<i>Tilletia tritici</i>	Wheat (1).
<i>Ustilago hordei</i> (smut).....	Barley (1).
AUSTRALIA.	
<i>Diaspis echinocacti cacti</i> (scale insect).....	<i>Opuntia</i> fruits (1).
Diseases:	
<i>Colletotrichum gloeosporioides</i>	Citrus—Mandarin bud wood (1).
<i>Fusarium</i> sp.....	<i>Allium cepa</i> (1).
<i>Sclerotium Rolfsii</i>	<i>Anona</i> spp. (1).
BELGIUM.	
<i>Aleyrodes</i> sp. (white fly).....	<i>Azalea</i> (89).
Aphids (plant lice).....	<i>Azalea</i> (5).
<i>Aspidiotus britannicus</i> (scale insect).....	Bay (9).
<i>Aspidiotus hederæ</i> (ivy scale).....	Bay (1).
Do.....	Palm (20).
Braconid cocoons.....	<i>Azalea</i> (1).
Carabid (beetle).....	Do.
<i>Cerataphis lataniae</i> (plant louse).....	Palm (1).
<i>Chrysomphalus dictyospermi</i> (scale insect).....	<i>Azalea</i> (1).
Do.....	Bay (1).
Do.....	Palm (7).
<i>Chrysomphalus ficus</i> (Florida red scale).....	Do.
<i>Chrysomphalus rossi</i> (scale insect).....	Palm (1).
<i>Coccus hesperidum</i> (soft brown scale).....	Bay (20).
Do.....	<i>Dracæna</i> (1).
Do.....	Palm (4).
<i>Diaspis echinocacti cacti</i> (scale insect).....	<i>Opuntia</i> (1).
<i>Exochomus 4-pustulata</i> (ladybird).....	Bay (1).
Geometrid larva.....	<i>Azalea</i> (1).
<i>Gracilaria zachrysa</i> (leaf miner).....	<i>Azalea</i> (102).
<i>Hemichionaspis aspidistrae</i> (aspidistra scale).....	<i>Aspidistra</i> (16).
Do.....	Palm (1).
Leaf folders.....	<i>Azalea</i> (1).
Leaf miner (Lepidopterous).....	Do.
Leaf rollers.....	<i>Azalea</i> (13).
Leaf tip curlers.....	<i>Azalea</i> (1).
Leaf tyers.....	Do.
<i>Lecanium</i> (?) (scale insect).....	Palm (2).
Lepidopterous cocoons.....	<i>Azalea</i> (4).
Lepidopterous larvae.....	<i>Azalea</i> (3).
Lepidopterous pupae.....	<i>Azalea</i> (2).
<i>Lygus pratensis</i> (tarnished plant bug).....	<i>Azalea</i> (1).
Mites, brown.....	<i>Azalea</i> (2).
Noctuid larva.....	<i>Azalea</i> (1).
Noctuid moth, eggs of.....	Do.
<i>Peronea schalleriana</i> (Tortricid).....	<i>Azalea</i> (5).
<i>Porthetria dispar</i> (gipsy moth) (egg mass).....	<i>Azalea</i> (3).
<i>Pseudococcus citri</i> (citrus mealy bug).....	Palm (1).
<i>Pseudococcus</i> sp. (mealy bug).....	<i>Azalea</i> (2).
Do.....	Bay (3).
Do.....	Palm (4).

List, by countries, of pests collected—Continued.

Country of origin and name of pest.	Host.
BELGIUM—continued.	
Saissetia hemisphaerica (hemispherical scale).....	Palm (1).
Sawfly cocoons (empty).....	Azalea (1).
Spiders, red.....	Azalea (2).
Thrips.....	Azalea (1).
Tingitid eggs (lacewing).....	Rhododendron (2).
Tortricid leaf tyer.....	Azalea (2).
Diseases:	
Bacterium tumefaciens (crown gall).....	Do.
Colletotrichum omnivorum.....	Aspidistra (1).
Exobasidium sp.....	Azalea (173).
Hypochnus ochroleucus (?).....	Azalea (1).
Laestadia rhododendri.....	Rhododendron (1).
Pestalozzia fenestralis (?).....	Azalea (1).
Pestalozzia guepini.....	Azalea (16).
Do.....	Rhododendron (2).
Septoria rhododendri.....	Azalea (3).
BERMUDA.	
Lecanium (?) (scale insect).....	Palm (1).
Disease: "Bermuda Lily disease".....	Lilium (1).
BOLIVIA.	
Disease: Corticium vagum var. solani (Rhizoctonia).....	Irish potato (1).
BRAZIL.	
Amydria sp. (Lepidoptera).....	Dry refuse (1).
Blattella sp. (?) (roach).....	(?).
Ischnoptera (?) (roach).....	(?).
Monomorium floricola (ant).....	Sugar cane (1).
Rhizococcus sp.....	Cereus (1).
Silvanus advena (beetle).....	(?).
Diseases:	
Colletotrichum gloeosporioides.....	Orchid (2).
Diplodia sp.....	Orchid (1).
Phyllosticta sp. (?).....	Rice (1).
Stachybotrys.....	Opuntia quipa (1).
CANADA.	
Diseases:	
Gloeosporium apocryptum.....	Maple (1).
Uromyces sp.....	Hedysarum boreale (1).
CHINA.	
Phenacaspis eugeniae (scale insect).....	Ornamental plants (1).
Diseases:	
Aecidium chionanthi.....	Chionanthus retusa (1).
Caryospora putaminum.....	Prunus persica (peach seed) (1).
Do.....	Prunus sp. (1).
Lasiodiplodia sp.....	Nephelium litchi (4).
Tylenchus tritici (nematode).....	Wheat (1).
Uromyces sp.....	Vicia sp. (1).
Ustilago hordei (smut).....	Barley (1).
Ustilago laevis.....	Avena nuda (1).
COLOMBIA.	
Ants.....	Orchid (3).
Chrysomphalus perseae (scale insect).....	Orchid (1).
Leaf miner work.....	Do.
Mites.....	Do.
Roaches.....	Orchid (2).
Tenthecoris bicolor (Hemipteron).....	Do.

List, by countries, of pests collected—Continued.

Country of origin and name of pest.	Host.
COSTA RICA.	
Diseases:	
Cephalothecium roseum.....	Polakowskia tacaco (1).
Colletotrichum gloeosporioides.....	Mangifera (1).
CUBA.	
Mite (purple).....	Pineapple slips (plants) (2).
Pseudococcus sp. (mealy bug).....	Do.
Saissetia hemisphaerica (hemispherical scale).....	Cycads (1).
DENMARK.	
Lepidosaphes ulmi (oyster-shell scale).....	Lilac (1).
Notolophus antiqua (European tussock moth) (eggs).....	Roses (1).
DUTCH EAST INDIES (CELEBES).	
Aspidiotus sp. (scale insect).....	Orchid (1).
ECUADOR.	
Undescribed genus of Scolytoidea.....	Condurango pods (?) (1).
ENGLAND.	
Aphid eggs (plant louse).....	Apple (1).
Aspidiotus hederæ (ivy scale).....	Orchid (1).
Chionaspis furfura (scurfy scale).....	Apple (1).
Chrysomphalus dictyospermi (scale insect).....	Orchid (1).
Merodon narcissi (Narcissus fly).....	Narcissus bulbs (Cresset) (1).
Notolophus antiqua (European tussock moth) (eggs).....	Apple (1).
Pseudococcus sp. (mealy bug).....	Stephanotis (1).
Disease: Bacterium tumefaciens (crown gall).....	Rose stock (5).
EUROPE.	
Bryobia pratensis (clover mite) (eggs).....	English elm (1).
FII ISLANDS.	
Disease: Colletotrichum gloeosporioides.....	Citrus (bud sticks, Mandarin) (1).
FRANCE.	
Aphid (plant louse).....	Berberis sp. (1).
Chrysomphalus dictyospermi (scale insect).....	Palm (1).
Chrysomphalus ficus (Florida red scale).....	Do.
Eriosoma lanigera (woolly aphis).....	Apple (1).
Euproctis chrysorrhoea (brown-tail moth) (piece of nest).....	Do.
Gonepteryx rhamni (brimstone butterfly).....	Cotoneaster microphylla (1).
Pseudococcus sp. (mealy bug).....	Palm (1).
Diseases:	
Cephalothecium roseum.....	Maple (1).
Colletotrichum sp.....	Dalbergia sissoo (1).
Mycosphaerella fragariae.....	Fragaria sp. (1).
GREECE.	
Disease: Epicoccum neglectum.....	Rice (1).
GUATEMALA.	
Chrysomphalus dictyospermi (scale insect) (evidence).....	Orchid (1).
Pseudococcus sp. (mealy bug).....	Orchid (2).
Scale insects.....	Orchid (1).
HOLLAND.	
Aleurodes mori (white fly).....	Hawthorn (1).
Aleyrodes sp. (white fly).....	Azalea (5).
Do.....	Palm (1).

List, by countries, of pests collected—Continued.

Country of origin and name of pest.	Host.
HOLLAND—continued.	
Aphids (plant lice).....	Hydrangea (4).
Do.....	Lilac (1).
Do.....	Rose (1).
Aphid eggs (plant louse).....	Azalea (2).
Do.....	Clematis Jacksoni (1).
Do.....	Crataegus (1).
Do.....	Lilac (2).
Do.....	Prunus (1).
Do.....	Pyrus sp. (1).
Do.....	Wistaria (1).
Do.....	(?).
Aspidiotus britannicus (scale insect).....	Bay (1).
Aspidiotus hederæ (ivy scale).....	Evergreen plant (1).
Do.....	Palm (4).
Aulacaspis rosæ (rose scale).....	Roses (1).
Chionaspis salicis (scale insect).....	Lilac (1).
Chrysomphalus dictyospermi (scale insect).....	Palm (1).
Chrysomphalus ficus (Florida red scale).....	Do.
Chrysomphalus rossi (scale insect).....	Do.
Coccus hesperidum (soft brown scale).....	Bay (2).
Collembola.....	(?).
Corythuca sp. (lace bugs).....	Rhododendron (1).
Diprion simile (pine sawfly) (cocoon).....	(?).
Eriophyes buxi (mite).....	Boxwood (4).
Eriopora lanigera (?) (woolly aphis) (?).....	Flowering crab (1).
Gracilaria zachrysa (leaf miner).....	Azalea (4).
Hemichionaspis aspidistrae (Aspidistra scale).....	Aspidistra (6).
Do.....	Palm (1).
Leaf miner.....	Apple (1).
Leaf rollers.....	Boxwood (1).
Do.....	Rhododendron (1).
Leaf tyer.....	Azalea (1).
Lecanium bituberculatum (scale insect).....	Crataegus oxyacantha (1).
Do.....	(?).
Lepidopterous pupa (large).....	(?).
Lepidosaphes sp. (scale insect).....	Boxwood (1).
Lepidosaphes ulmi (oyster-shell scale).....	Apple (1).
Do.....	Boxwood (60).
Do.....	Cerasus (1).
Do.....	Crataegus oxyacantha (1).
Do.....	Crataegus sp. (2).
Do.....	Fruit trees (1).
Do.....	Lilac (3).
Do.....	Prunus (1).
Do.....	(?).
Mites.....	Apple (1).
Do.....	Azalea (1).
Do.....	Cytisus (1).
Do.....	Genista sp. (1).
Do.....	Prunus (2).
Monarthropalpus buxi (box-leaf miner).....	Boxwood (2).
Notolophus antiqua (European tussock moth) (eggs).....	Prunus (1).
Do.....	Rhododendron (1).
Do.....	Rose (2).
Notolophus antiqua (European tussock moth) (cocoons).....	Maple (1).
Peronea schalleriana (Tortricid).....	Azalea (1).
Phytomyza aquifolii (Dipterous leaf miner).....	Holly (4).
Pseudococcus citri (citrus mealy bug).....	Palm (1).
Pseudococcus sp. (mealy bug).....	Do.
Psylla buxi (box psylla).....	Boxwood (22).
Pupa.....	Rhododendron (1).
Slug.....	In earth about root of Hydrangea hortensia (1).
Spiders, red.....	Azalea (2).
Do.....	Skimmia (2).
Staphylinid beetles.....	Roses (1).
Tingitid eggs (lacewing).....	Rhododendron (3).

List, by countries, of pests collected—Continued.

Country of origin and name of pest.	Host.
HOLLAND—continued.	
Diseases:	
Bacterium tumefaciens (crown gall).....	Lilac (2).
Do.....	Rhododendron (1).
Do.....	Roses (4).
Botrytis cinerea.....	Azalea (2).
Do.....	Clematis (2).
Do.....	Cornus (1).
Do.....	Cytisus (?) (1).
Do.....	Hydrangea (1).
Do.....	Laurocerasus (1).
Do.....	Lilac (1).
Do.....	Rose (1).
Botrytis cinerea (conidia).....	Cerasus (Double flowering cherry) (1).
Botrytis cinerea (sclerotia).....	Ceanothus (?) (1).
Do.....	Lilac (1).
Botrytis cinerea (sclerotia and conidia).....	Clematis (1).
Do.....	Rose (1).
Botrytis parasitica Sclerotium tuliparum.....	Narcissus (1).
Corticium vagum var. solani (Rhizoctonia).....	Irish potato (1).
Cytospora sp.....	Cytisus (?) (1).
Exobasidium.....	Azalea (14).
Do.....	Rhododendron (2).
Fusarium sp.....	Irish potato (1).
Gloeosporium pachybasium.....	Boxwood (3).
Gloeosporium rosae.....	Rose (1).
Laestadia rhododendri.....	Rhododendron (2).
Oospora scabies (common scab).....	Irish potato (1).
Pestalozzia guepini.....	Rhododendron (25).
Pestalozzia sp.....	Rhododendron (3).
Do.....	Skimmia (1).
Phoma aucubae.....	Aucuba japonica (1).
Phoma sp.....	Malus scheideckere (flowering apple) (1).
Do.....	Rhododendron (1).
Phyllosticta hydrangeae.....	Hydrangea (3).
Phyllosticta rhododendri.....	Rhododendron (1).
Phyllosticta sp.....	Clematis (1).
Do.....	Laurocerasus (1).
Do.....	Skimmia japonica (2).
Phytophthora infestans.....	Irish potato (1).
Pleospora aucubae.....	Aucuba (1).
Pleospora parvula.....	Mahonia aquifolia (1).
Tubercularia sp.....	Magnolia soulangeana var. Alexandrina (1).
Do.....	Wistaria (1).
Verticillium buxi.....	Boxwood (4).
Volutella buxi.....	Boxwood (10).
Volutella sp.....	Rose (1).
INDIA.	
Rhizopertha dominica (lesser grain borer).....	Wheat (1).
Diseases:	
Gloeosporium opuntiae.....	Opuntia sp. (1).
Perisporium Wrightii.....	Opuntia cochi nelifera (1).
Phyllosticta sp.....	Malphigia (1).
Puccinia glumarum.....	Wheat (1).
Puccinia graminis tritici.....	Do.
IRELAND.	
Lepidosaphes ulmi (oyster-shell scale).....	Paeonia officinalis lobata (1).
Spider, red.....	Carnation (1).
Diseases:	
Botrytis parasitica (Sclerotium tuliparum).....	Tulipa (cottage tulip) (1).
Gloeosporium samararum.....	Fraxinus excelsior (European ash) (1).
Spongospora subterranea (powdery scab).....	Irish potato (1).

List, by countries, of pests collected—Continued.

Country of origin and name of pest.	Host.
JAPAN.	
<i>Agromyza websteri</i> (Wistaria gall fly).....	Wistaria (1).
<i>Hemichionaspis aspidistrae</i> (Aspidistra scale).....	Aspidistra (1).
<i>Parlatoria</i> sp. (scale insect).....	Maple (1).
<i>Pseudaonidia duplex</i> (scale insect).....	Camellia (1).
MEXICO.	
<i>Saissetia oleae</i> (black scale).....	Chayote (1).
<i>Tetraleurodes</i> sp. (white fly).....	(?).
Disease: <i>Helminthosporium</i> sp.....	<i>Aristolochia grandiflora</i> (1).
PERU.	
<i>Rhizococcus</i> sp.....	<i>Cereus</i> (1).
Diseases:	
<i>Colletotrichum gloeosporioides</i>	Citrus (1).
<i>Corticium vagum</i> var. <i>solani</i> (<i>Rhizoctonia</i>).....	Irish potato (3).
<i>Gloeosporium</i> sp.....	<i>Manihot aipi</i> (1).
<i>Rabenhorstia</i> sp.?.....	Do.
PHILIPPINE ISLANDS.	
Diseases:	
<i>Colletotrichum gloeosporioides</i>	Citrus Luzon? <i>Atalantia</i> sp. (1).
<i>Gloeosporium</i> sp.....	<i>Garcinia mangostana</i> (1).
<i>Lasiodiplodia</i> sp.....	<i>Mangifera verticillata</i> (1).
<i>Lasiodiplodia tubericola</i>	<i>Mangifera indica</i> (mango) (1).
PORTO RICO.	
<i>Chrysomphalus dictyospermi</i> (scale insect).....	(?).
Disease: <i>Phyllosticta</i> sp.....	Citrus (1).
RUSSIA.	
Disease: <i>Puccinia graminis tritici</i>	Wheat (1).
SALVADOR.	
<i>Howardia biclavis</i> (mining scale).....	Aguacate amis (1).
SCOTLAND.	
<i>Hemichionaspis aspidistrae</i> (aspidistra scale).....	Aspidistra (1).
STRAITS SETTLEMENTS.	
<i>Elaterid</i> (wireworm).....	In soil (1).
<i>Eleutherodes</i> sp. (tree cockroach).....	(?).
<i>Monomorium</i> sp. (ant).....	In soil (?) (1).
<i>Prenolepis</i> sp. (ant) (nest of).....	Coconuts (1).
<i>Prenolepis</i> sp. (ant).....	In soil (?) (1).
<i>Pseudococcus</i> sp. (mealy bug).....	Coconuts (1).
Do.....	<i>Mussaenda erythrophylla</i> (1).
<i>Tetramorium guineense</i> (ant).....	In soil on roots of sealing wax palm (1).
TRINIDAD.	
Mites.....	In packing around seeds (1).
TUNIS.	
Disease: <i>Puccinia graminis tritici</i>	Wheat (1).
VENEZUELA.	
<i>Chrysomphalus dictyospermi</i> (scale insect).....	Orchid (1).
<i>Diaspis boisduvalii</i> (scale insect).....	Do.

LIST, BY STATES, OF PESTS COLLECTED.

(The number in parentheses following name of country indicates the number of times reported.)

State in which collected and name of pest.	Host.	Country of origin.
CALIFORNIA.		
Aleyrodes sp. (white fly).....	Azalea.....	Belgium (12).
Aspidiotus britannicus (scale insect).....	Bay.....	Belgium (6).
Aspidiotus hederæ (ivy scale).....	Palm.....	Belgium (3).
Aspidiotus sp. (scale insect).....	Orchid.....	Celebes, Dutch East Indies (1).
Chrysomphalus dictyospermi (scale insect).....	do.....	Guatemala (1).
Do.....	do.....	Venezuela (1).
Coccus hesperidum (soft brown scale).....	Bay.....	Belgium (6).
Do.....	Dracaena.....	Belgium (1).
Do.....	Palm.....	Do.
Diaspis boisduvalii (scale insect).....	Orchid.....	Venezuela (1).
Gracilaria zachrysa (leaf miner).....	Azalea.....	Belgium (1).
Hemichionaspis aspidistrae (aspidistra scale).....	Aspidistra.....	Do.
Do.....	do.....	Japan (1).
Howardia biclavus (mining scale).....	Aguacate amis.....	Salvador (1).
Lepidopterous cocoons.....	Azalea.....	Belgium (1).
Lepidopterous larvæ.....	do.....	Do.
Lepidosaphes ulmi (oyster-shell scale).....	Boxwood.....	Holland (8).
Mites.....	Genista sp.....	Holland (1).
Parlatoria sp. (scale insect).....	Maple.....	Japan (1).
Pseudococcus sp. (mealy bug).....	Bay.....	Belgium (2).
Do.....	Orchid.....	Guatemala (2).
Saissetia hemisphaerica (hemispherical scale).....	Cycads.....	Cuba (1).
Scale insects.....	Orchid.....	Guatemala (1).
Thrips.....	Azalea.....	Belgium (1).
CONNECTICUT.		
Aleyrodes sp. (white fly).....	Azalea.....	Belgium (3).
Coccus hesperidum (soft brown scale).....	Palm.....	Belgium (1).
Hemichionaspis aspidistrae (aspidistra scale).....	Aspidistra.....	Do.
Lepidopterous cocoon.....	Azalea.....	Do.
Lepidopterous larva.....	do.....	Do.
Lepidosaphes ulmi (oyster-shell scale).....	Boxwood.....	Holland (3).
Psyllids.....	do.....	Holland (1).
Sawfly cocoons (empty).....	Azalea.....	Belgium (1).
Staphylinid beetles.....	Rose.....	Holland (1).
Diseases:		
Bacterium tumefaciens (crown gall).....	Rose stocks.....	England (1).
Exobasidium sp.....	Azalea.....	Belgium (47).
Pestalozzia guepini.....	Rhododendron.....	Holland (2).
DELAWARE.		
Lepidosaphes ulmi (oyster-shell scale).....	Boxwood.....	Holland (1).
Disease: Bacterium tumefaciens (crown gall).....	Rose.....	Do.
DISTRICT OF COLUMBIA.		
Aleurodes mori (white fly).....	Boxwood.....	Holland (1).
Aleyrodes sp. (white fly).....	Azalea.....	Belgium (7).
Amydria sp. (Lepidoptera).....	Dry refuse.....	Brazil (1).
Aphids (plant lice).....	Azalea.....	Belgium (1).
Do.....	Clematis Jacksoni.....	Holland (1).
Do.....	Crataegus.....	Do.
Do.....	Hydrangea.....	Do.
Aphid eggs (plant louse).....	Azalea.....	Holland (2).
Do.....	Ilac.....	Do.
Do.....	Prunus.....	Holland (1).
Do.....	Wistaria.....	Do.
Aspidiotus hederæ (ivy scale).....	Palm.....	Belgium (1).
Blattella sp. (?) (roach).....	(?).....	Brazil (1).
Bryobia pratensis (clover mite) (eggs of).....	English elm.....	Europe (1).
Calandra oryza (rice weevil).....	Yeheb nuts.....	Arabia (1).

List, by States, of pests collected—Continued.

State in which collected and name of pest.	Host.	Country of origin.
DISTRICT OF COLUMBIA—continued.		
Cerataphis lataniae (plant louse).....	Palm.....	Belgium (1).
Chrysomphalus dictyospermi (scale insect).....	(?).....	Porto Rico (1).
Corythuca sp. (lace-bug).....	Rhododendron.....	Holland (1).
Diaspis echinocacti cacti (scale insect).....	Opuntia.....	Belgium (1).
Do.....	Opuntia fruits.....	Australia (1).
Ephestia kuehniella.....	Yeheb nuts.....	Arabia (1).
Ischnoptera (?) (roach).....	(?).....	Brazil (1).
Leaf rollers (Lepidopterous).....	Azalea.....	Belgium (1).
Do.....	Boxwood.....	Holland (1).
Leaf tyer.....	Azalea.....	Do.
Lepidosaphes sp. (scale insect).....	Boxwood.....	Do.
Lepidosaphes ulmi (oyster-shell scale).....	do.....	Holland (7).
Do.....	Paonia officinalis lobata.....	Ireland (1).
Merodon narcissi (narcissus fly).....	Narcissus bulbs (Cresset).....	England (1).
Monomorium floricola (ant).....	Sugar cane.....	Brazil (1).
Rhizococcus sp.....	Cereus.....	Do.
Do.....	do.....	Peru (1).
Rhizopertha dominica (lesser grain borer).....	Wheat.....	India (1).
Saissetia oleae (black scale).....	Chayote.....	Mexico (1).
Scolytoidea, undescribed genus of.....	Condurango pods (?).....	Ecuador (1).
Silvanus advena (beetle).....	(?).....	Brazil (1).
Silvanus surinamensis (saw-toothed grain beetle).....	Yeheb nuts.....	Arabia (1).
Spiders, red.....	Carnation plants.....	Ireland (1).
Do.....	Skimmia.....	Holland (2).
Tetraleurodes sp. (white fly).....	(?).....	Mexico (1).
Diseases:		
Aecidium chionanthi.....	Chionanthus retusa.....	China (1).
Bacterium tumefaciens (crown gall).....	Lilac.....	Holland (2).
"Bermuda Lily disease".....	Lilium.....	Bermuda (1).
Botrytis cinerea.....	Azalea.....	Holland (2).
Do.....	Clematis.....	Do.
Do.....	Cornus.....	Holland (1).
Do.....	Cytisus (?).....	Do.
Do.....	Hydrangea.....	Do.
Do.....	Laurocerasus.....	Do.
Do.....	Lilac.....	Do.
Do.....	Rose.....	Do.
Botrytis cinerea (conidia).....	Cerasus (double flower- ing cherry).....	Do.
Botrytis cinerea (sclerotia).....	Lilac.....	Do.
Botrytis cinerea (sclerotia and conidia).....	Rose.....	Do.
Botrytis parasitica (Sclerotium tuliparum).....	Tulipa (cottage tulip).....	Ireland (1).
Do.....	Narcissus.....	Holland (1).
Caryospora putaminum.....	Prunus persica (peach seed).....	China (1).
Do.....	Prunus sp.....	Do.
Cephalothecium roseum.....	Maple.....	France (1).
Do.....	Polakowskia tacaco.....	Costa Rica (1).
Colletotrichum gloeosporioides.....	Citrus.....	Peru (1).
Do.....	Citrus (bud sticks, Man- darin).....	Fiji Islands (1).
Do.....	Citrus Luzon? Atalantia sp.....	Philippine Islands (1).
Do.....	Citrus—Mandarin bud wood.....	Australia (1).
Do.....	Mangifera.....	Costa Rica (1).
Colletotrichum sp.....	Dalbergia sissoo.....	France (1).
Corticium vagum var. solani (Rhizoctonia).....	Irish potato.....	Bolivia (1).
Do.....	do.....	Holland (1).
Do.....	do.....	Peru (3).
Cytospora sp.....	Cytisus (?).....	Holland (1).
Epicoccum neglectum.....	Rice.....	Greece (1).
Exobasidium.....	Azalea.....	Belgium (22).
Do.....	do.....	Holland (10).

List, by States, of pests collected—Continued.

State in which collected and name of pest.	Host.	Country of origin.
DISTRICT OF COLUMBIA—continued.		
Diseases—Continued.		
Exobasidium.....	Rhododendron.....	Holland (2).
Fusarium sp.....	Allium cepa.....	Australia (1).
Do.....	Irish potato.....	Holland (1).
Gloeosporium apocryptum.....	Maple.....	Canada (1).
Gloeosporium opuntiae.....	Opuntia sp.....	India (1).
Gloeosporium pachybasium.....	Boxwood.....	Holland (3).
Gloeosporium rosae.....	Rose.....	Holland (1).
Gloeosporium samararum.....	Fraxinus excelsior (Eu- ropean ash).....	Ireland (1).
Gloeosporium sp.....	Garcinia mangostana.....	Philippine Islands (1).
Do.....	Manihot aipi.....	Peru (1).
Helminthosporium sp.....	Aristolochia grandiflora.....	Mexico (1).
Laestadia rhododendri.....	Rhododendron.....	Belgium (1).
Do.....	do.....	Holland (2).
Lasiodiplodia sp.....	Mangifera verticillata.....	Philippine Islands (1).
Do.....	Nephelium litchi.....	China (4).
Lasiodiplodia tubericola.....	Mangifera indica (mango).....	Philippine Islands (1).
Mycosphaerella fragariae.....	Fragaria sp.....	France (1).
Oospora scabies (common scab).....	Irish potato.....	Holland (1).
Perisporium Wrightii.....	Opuntia cochi nelifera.....	India (1).
Pestalozzia guepini.....	Azalea.....	Belgium (14).
Do.....	do.....	Holland (2).
Do.....	Rhododendron.....	Belgium (1).
Do.....	do.....	Holland (12).
Phoma aucubae.....	Aucuba japonica.....	Holland (1).
Phoma sp.....	Malus scheideckere (flowering apple).....	Do.
Do.....	Quercus falcata.....	Algeria (1).
Do.....	Rhododendron.....	Holland (1).
Phyllosticta hydrangeae.....	Hydrangea.....	Holland (3).
Phyllosticta rhododendri.....	Rhododendron.....	Holland (1).
Phyllosticta sp.....	Citrus.....	Porto Rico (1).
Do.....	Laurocerasus.....	Holland (1).
Do.....	Maliphigia.....	India (1).
Do.....	Skimmia japonica.....	Holland (2).
Phyllosticta sp. (?).....	Rice.....	Brazil (1).
Phytophthora infestans.....	Irish potato.....	Holland (1).
Pleospora aucubae.....	Aucuba.....	Do.
Puccinia glumarum.....	Wheat.....	India (1).
Puccinia graminis tritici.....	do.....	Do.
Do.....	do.....	Russia (1).
Do.....	do.....	Tunis (1).
Rabenhorstia sp?.....	Manihot aipi.....	Peru (1).
Sclerotium Rolfsii.....	Anona spp.....	Australia (1).
Septoria rhododendri.....	Azalea.....	Belgium (1).
Spongospora subterranea (powdery scab).....	Irish potato.....	Ireland (1).
Stachybotrys.....	Opuntia quipa.....	Brazil (1).
Tilletia tritici.....	Wheat.....	Argentina (1).
Tubercularia sp.....	Magnolia soulangeana var. Alexandrina.....	Holland (1).
Do.....	Wistaria.....	Do.
Tylenchus tritici (nematode).....	Wheat.....	China (1).
Uromyces sp.....	Hedysarum boreale.....	Canada (1).
Do.....	Vicia sp.....	China (1).
Ustilago hordei (smut).....	Barley.....	Argentina (1).
Do.....	do.....	China (1).
Ustilago laevis.....	Avena nuda.....	Do.
Verticillium buxi.....	Boxwood.....	Holland (4).
Volutella buxi.....	do.....	Holland (10).
Volutella sp.....	Rose.....	Holland (1).
FLORIDA.		
Mite (purple).....	Pineapple slips (plants).....	Cuba (2).
Pseudococcus sp. (mealy bug).....	do.....	Do.

List, by States, of pests collected—Continued.

State in which collected and name of pest.	Host.	Country of origin.
GEORGIA.		
<i>Aspidiotus hederae</i> (ivy scale).....	Evergreen plant.....	Holland (1).
<i>Coccus hesperidum</i> (soft brown scale).....	Bay.....	Belgium (2).
Disease: <i>Pleospora parvula</i>	<i>Mahonia aquifolia</i>	Holland (1).
HAWAII.		
Elaterid (wireworm).....	In soil.....	Straits Settlements (1).
<i>Eleutherodes</i> sp. (tree cockroach).....	(?).....	Do.
<i>Monomorium</i> sp. (ant).....	In soil (?).....	Do.
<i>Phenacaspis eugeniae</i> (scale insect).....	Ornamental plants.....	China (1).
<i>Prenolepis</i> sp. (ant).....	Coconuts.....	Straits Settlements (1).
Do.....	In soil (?).....	Do.
<i>Pseudococcus</i> sp. (mealy bug).....	Coconuts.....	Do.
Do.....	<i>Mussaenda erythro-</i> <i>phylla</i>	Do.
<i>Tetramorium guineense</i> (ant).....	In soil on roots of sealing wax palm.....	Do.
IDAHO.		
Spider, red.....	Azalea.....	Holland (1).
ILLINOIS.		
<i>Aleyrodes</i> sp. (white fly).....	Azalea.....	Belgium (5).
<i>Aspidiotus hederae</i> (ivy scale).....	Palm.....	Belgium (1).
Carabid (beetle).....	Azalea.....	Do.
<i>Coccus hesperidum</i> (soft brown scale).....	Bay.....	Do.
Leaf rollers.....	Azalea.....	Belgium (10).
Lepidopterous cocoon.....	do.....	Belgium (1).
Lepidopterous pupae.....	do.....	Belgium (2).
Disease: <i>Exobasidium</i>	do.....	Belgium (6).
INDIANA.		
<i>Aleyrodes</i> sp. (white fly).....	Azalea.....	Belgium (1).
<i>Coccus hesperidum</i> (soft brown scale).....	Palm.....	Do.
<i>Diprion simile</i> (pine sawfly).....	(?).....	Holland (1).
Geometrid larva.....	Azalea.....	Belgium (1).
<i>Gracilaria zachrysa</i> (leaf miner).....	do.....	Belgium (10).
Leaf miner.....	Apple.....	Holland (1).
Leaf miner (lepidopterous).....	Azalea.....	Belgium (1).
<i>Lecanium bituberculatum</i> (scale insect).....	<i>Crataegus oxyacantha</i>	Holland (1).
Do.....	(?).....	Do.
Lepidopterous larva.....	Azalea.....	Belgium (1).
<i>Lepidosaphes ulmi</i> (oyster-shell scale).....	Apple.....	Holland (1).
Do.....	<i>Crataegus oxyacantha</i>	Do.
Do.....	(?).....	Do.
Mites.....	<i>Cytisus</i>	Do.
Do.....	<i>Prunus</i>	Do.
Noctuid larva.....	Azalea.....	Belgium (1).
<i>Notolophus antiqua</i> (European tussock moth) (cocoons).....	Maple.....	Holland (1).
<i>Notolophus antiqua</i> (European tussock moth) (eggs).....	<i>Prunus</i>	Do.
<i>Pseudococcus</i> sp. (mealy bug).....	Azalea.....	Belgium (1).
<i>Saissetia hemisphaerica</i> (hemispherical scale).....	Palm.....	Do.
Diseases:		
<i>Botrytis cinerea</i> (sclerotia).....	<i>Ceanothus</i> (?).....	Holland (1).
<i>Botrytis cinerea</i> (sclerotia and conidia).....	<i>Clematis</i>	Do.
<i>Exobasidium</i>	Azalea.....	Belgium (13).
<i>Pestalozzia fenestralis</i> (?).....	do.....	Belgium (1).
<i>Pestalozzia guepini</i>	<i>Rhododendron</i>	Holland (4).
<i>Pestalozzia</i> sp.	do.....	Holland (1).
Do.....	<i>Skimmia</i>	Do.
<i>Phyllosticta</i> sp.	<i>Clematis</i>	Do.

List, by States, of pests collected—Continued.

State in which collected and name of pest.	Host.	Country of origin.
IOWA.		
Aleyrodes sp. (white fly).....	Azalea.....	Belgium (16).
Do.....	do.....	Holland (1).
Braconid cocoons.....	do.....	Belgium (1).
Gracilaria zachrysa (leaf miner) (work of).....	do.....	Do.
Leaf rollers.....	do.....	Belgium (2).
Lepidopterous pupa (large).....	(?).....	Holland (1).
Diseases:		
Bacterium tumefaciens (crown gall).....	Rose stocks.....	England (1).
Exobasidium.....	Azalea.....	Belgium (41).
Do.....	do.....	Holland (3).
KENTUCKY.		
Aleyrodes sp. (white fly).....	Azalea.....	Belgium (1).
Aphid eggs (plant louse).....	Pyrus sp.....	Holland (1).
Coccus hesperidum (soft brown scale).....	Palm.....	Belgium (1).
Lepidosaphes ulmi (oyster-shell scale).....	Boxwood.....	Holland (1).
Disease: Exobasidium.....	Azalea.....	Belgium (1).
LOUISIANA.		
Aspidiotus hederæ (ivy scale).....	Bay.....	Belgium (1).
Chrysomphalus dictyospermi (scale insect).....	do.....	Do.
Coccus hesperidum (soft brown scale).....	do.....	Belgium (2).
Leaf miner work.....	do.....	Belgium (1).
MAINE.		
Tortricid leaf tyer.....	Azalea.....	Belgium (1).
MARYLAND.		
Lepidosaphes ulmi (oyster-shell scale).....	Boxwood.....	Holland (1).
MASSACHUSETTS.		
Chionaspis salicis (scale insect).....	Lilac.....	Holland (1).
Chrysomphalus dictyospermi (scale insect).....	Orchid.....	England (1).
Do.....	Palm.....	Belgium (1).
Chrysomphalus ficus (Florida red scale).....	do.....	Do.
Gracilaria zachrysa (leaf miner).....	Azalea.....	Belgium (77).
Do.....	do.....	Holland (3).
Leaf folders.....	do.....	Belgium (1).
Leaf tyers.....	do.....	Do.
Lepidosaphes ulmi (oyster-shell scale).....	Boxwood.....	Holland (1).
Do.....	Crataegus sp.....	Do.
Do.....	Lilac.....	Denmark (1).
Notolophus antiqua (European tussock moth) (eggs).....	Rose.....	Do.
Do.....	do.....	Holland (1).
Peronea schalleriana (Tortricid).....	Azalea.....	Belgium (5).
Do.....	do.....	Holland (1).
Phytomyza aquifolii (Dipterous leaf miner).....	Holly.....	Holland (2).
Plant-louse eggs.....	(?).....	Holland (1).
Diseases:		
Bacterium tumefaciens (crown gall).....	Rhododendron.....	Do.
Exobasidium sp.....	Azalea.....	Belgium (5).
Pestalozzia guenepini.....	do.....	Belgium (2).
Septoria rhododendri.....	do.....	Do.
MICHIGAN.		
Lecanium (?) (scale insect).....	Palm.....	Belgium (1).
MINNESOTA.		
Aleyrodes sp. (white fly).....	Palm.....	Holland (1).
Aphid (plant louse).....	Berberis sp.....	France (1).
Do.....	Rose.....	Holland (1).

List, by States, of pests collected—Continued.

State in which collected and name of pest.	Host.	Country of origin.
MINNESOTA—continued.		
Aspidiotus hederæ (ivy scale).....	Palm.....	Belgium (1).
Chrysomphalus rossi (scale insect).....	do.....	Do.
Do.....	do.....	Holland (1).
Hemichionaspis aspidistrae (aspidistra scale).....	do.....	Belgium (1).
Do.....	do.....	Holland (1).
Pseudococcus citri (citrus mealy bug).....	do.....	Belgium (1).
Do.....	do.....	Holland (1).
MISSISSIPPI.		
Aspidiotus britannicus (scale insect).....	Bay.....	Belgium (1).
Coccus hesperidum (soft brown scale).....	do.....	Do.
Disease: Hypochnus ochroleucus (?).....	Azalea.....	Do.
MISSOURI.		
Hemichionaspis aspidistrae (aspidistra scale).....	Aspidistra.....	Belgium (2).
Lepidosaphes ulmi (oyster-shell scale).....	Fruit trees.....	Holland (1).
Psyllidae, dead.....	Boxwood.....	Do.
Disease: Exobasidium.....	Azalea.....	Belgium (25).
NEBRASKA.		
Aleyrodes sp. (white fly).....	Azalea.....	Belgium (1).
Aphids (plant lice).....	do.....	Belgium (4).
Do.....	Hydrangea.....	Holland (2).
Do.....	Lilac.....	Holland (1).
Collembola.....	(?).....	Do.
Lepidopterous cocoon, empty.....	Azalea.....	Belgium (1).
Lygus pratensis (tarnished plant bug).....	do.....	Do.
Mites.....	do.....	Belgium (2).
Do.....	do.....	Holland (1).
Slug.....	In earth about root of Hydrangea hortensia.	Do.
Spiders, red.....	Azalea.....	Belgium (2).
Do.....	do.....	Holland (1).
Disease: Exobasidium.....	do.....	Belgium (5).
NEW JERSEY.		
Aleyrodes sp. (white fly).....	Azalea.....	Belgium (34).
Do.....	do.....	Holland (2).
Aspidiotus britannicus (scale insect).....	Bay.....	Belgium (1).
Do.....	do.....	Holland (1).
Aspidiotus hederæ (ivy scale).....	Orchid.....	England (1).
Do.....	Palm.....	Belgium (9).
Do.....	do.....	Holland (4).
Aulacaspis rosæ (rose scale).....	Rose.....	Holland (1).
Chrysomphalus dictyospermi (scale insect).....	Azalea.....	Belgium (1).
Do.....	Palm.....	Belgium (5).
Do.....	do.....	France (1).
Do.....	do.....	Holland (1).
Chrysomphalus ficus (Florida red scale).....	do.....	Belgium (6).
Do.....	do.....	France (1).
Do.....	do.....	Holland (1).
Chrysomphalus perseæ (scale insect).....	Orchid.....	Colombia (1).
Coccus hesperidum (soft brown scale).....	Bay.....	Belgium (5).
Do.....	do.....	Holland (2).
Eriosoma lanigera (woolly aphid).....	Apple.....	France (1).
Exochomus 4-pustulata (ladybird).....	Bay.....	Belgium (1).
Gonepteryx rhamni (brimstone butterfly).....	Cotoneaster microphylla	France (1).
Gracilaria zachrysa (leaf miner).....	Azalea.....	Belgium (13).
Do.....	do.....	Holland (1).
Hemichionaspis aspidistrae (aspidistra scale).....	Aspidistra.....	Belgium (12).
Do.....	do.....	Holland (6).
Do.....	do.....	Scotland (1).

List, by States, of pests collected—Continued.

State in which collected and name of pest.	Host.	Country of origin.
NEW JERSEY—continued.		
Lepidosaphes ulmi (oyster-shell scale).....	Boxwood.....	Holland (26).
Do.....	Cerasus.....	Holland (1).
Do.....	Crataegus.....	Do.
Do.....	Lilac.....	Holland (3).
Do.....	Prunus.....	Holland (1).
Mites.....	Apple.....	Do.
Do.....	In packing around seeds.	Trinidad (1).
Do.....	Prunus.....	Holland (1).
Monarthropalpus buxi (box leaf miner).....	Boxwood.....	Holland (2).
Phytomyza aquifolii (Dipterous leaf miner).....	Holly.....	Do.
Pseudococcus sp. (mealy bug).....	Azalea.....	Belgium (1).
Pseudococcus sp. (mealy bug).....	Bay.....	Do.
Do.....	Palm.....	Belgium (4).
Do.....	do.....	France (1).
Do.....	do.....	Holland (1).
Do.....	Stephanotis.....	England (1).
Roaches.....	Orchid.....	Colombia (1).
Tingitid eggs (lacewing).....	Rhododendron.....	Belgium (2).
Do.....	do.....	Holland (3).
Diseases:		
Bacterium tumefaciens (crown gall).....	Rose.....	England (1).
Do.....	do.....	Holland (1).
NEW YORK CITY (FEDERAL INSPECTION).		
Ants.....	Orchid.....	Colombia (3).
Mites.....	do.....	Colombia (1).
Roaches.....	do.....	Do.
Tenthoris bicolor (Hemipteron, family Capsidae).....	do.....	Colombia (2).
Diseases:		
Colletotrichum gloeosporioides.....	do.....	Brazil (2).
Diplodia sp.....	do.....	Brazil (1).
NEW YORK.		
Euproctis chrysorrhoea (brown-tail moth) (piece of nest).....	Apple.....	France (1).
Lecanium (?) (scale insect).....	Palm.....	Bermuda (1).
Porthetria dispar (gipsy moth) (egg mass).....	Azalea.....	Belgium (2).
Pupa.....	Rhododendron.....	Holland (1).
Disease: Bacterium tumefaciens (crown gall).....	Rose stock.....	England (2).
OHIO.		
Aphids (plant lice).....	Hydrangea.....	Holland (1).
Leaf rollers.....	Rhododendron.....	Do.
Lecanium (?) (scale insect).....	Palm.....	Belgium (1).
Lepidosaphes ulmi (oyster-shell scale).....	Boxwood.....	Holland (2).
Noctuid moth, eggs of.....	Azalea.....	Belgium (1).
Tortricid leaf tyer.....	do.....	Do.
Disease: Exobasidium.....	do.....	Belgium (3).
OREGON.		
Eriosoma lanigera (?) (woolly aphid) (?).....	Flowering crab.....	Holland (1).
Notolophus antiqua (European tussock moth) (eggs).....	Rhododendron.....	Do.
PENNSYLVANIA.		
Aleyrodes sp. (white fly).....	Azalea.....	Belgium (9).
Do.....	do.....	Holland (2).
Aphid eggs (plant louse).....	Apple.....	England (1).
Aspidiotus hederæ (ivy scale).....	Palm.....	Belgium (4).
Chionaspis furfura (scurfy scale).....	Apple.....	England (1).
Coccus hesperidum (soft brown scale).....	Bay.....	Belgium (2).
Eriophyes buxi (mite).....	Boxwood.....	Holland (4).
Lepidosaphes ulmi (oyster-shell scale).....	do.....	Holland (10).

List, by States, of pests collected—Continued.

State in which collected and name of pest.	Host.	Country of origin.
PENNSYLVANIA—continued.		
<i>Notolophus antiqua</i> (European tussock moth) (eggs).....	Apple.....	England (1).
<i>Psylla buxi</i> (box psylla).....	Boxwood.....	Holland (20).
Diseases:		
<i>Colletotrichum omnivorum</i>	Aspidistra.....	Belgium (1).
<i>Pestalozzia guepini</i>	Rhododendron.....	Do.
Do.....	do.....	Holland (5).
<i>Pestalozzia</i> sp.....	do.....	Holland (2).
RHODE ISLAND.		
<i>Chrysomphalus dictyospermi</i> (scale insect).....	Palm.....	Belgium (1).
Leaf tip curlers.....	Azalea.....	Do.
Disease: <i>Bacterium tumefaciens</i> (crown gall).....	Rose.....	Holland (1).
SOUTH CAROLINA.		
<i>Aspidiotus britannicus</i> (scale insect).....	Bay.....	Belgium (1).
<i>Aspidiotus hederæ</i> (ivy scale).....	Palm.....	Do.
<i>Coccus hesperidum</i> (soft brown scale).....	Bay.....	Do.
WASHINGTON (STATE).		
<i>Agromyza websteri</i> (wistaria gall fly).....	Wistaria.....	Japan (1).
<i>Pseudaonidia duplex</i> (scale insect).....	Camellia.....	Do.
Diseases:		
<i>Bacterium tumefaciens</i> (crown gall).....	Rose.....	Holland (1).
<i>Exobasidium</i> sp.....	Azalea.....	Belgium (1).
WEST VIRGINIA.		
Disease: <i>Exobasidium</i> sp.....	Azalea.....	Belgium (2).
WISCONSIN.		
<i>Notolophus antiqua</i> (European tussock moth) (egg mass).....	Rose.....	Holland (1).
<i>Porthetria dispar</i> (gipsy moth) (eggs).....	Azalea.....	Belgium (1).
Diseases:		
<i>Bacterium tumefaciens</i> (crown gall).....	do.....	Do.
<i>Exobasidium</i>	do.....	Belgium (3).
Do.....	do.....	Holland (1).